APPLICATION

TO

U.S. ENVIRONMENTAL PROTECTION AGENCY

FOR

R.C.R.A. PERMIT FOR EXISTING HAZARDOUS

WASTE STORAGE FACILITY

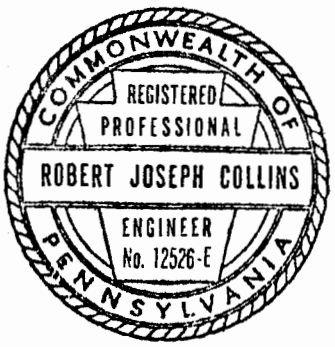
MODIFIED PART A

AND

PART B

CHEMCLENE CORPORATION
258 N. PHOENIXVILLE PIKE
MALVERN, PA 19355

APRIL 30, 1984



Robert J Collins

Robert J. Collins
VALLEY FORGE LABORATORIES, INC.
Devon, Pennsylvania

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SECTION A

PART A APPLICATION

The Part A application includes a copy of Form 1 which was completed at an earlier date (please note address change) and a completed Form 3 (ammended from the previous submission) including a facility map.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F PAD 014353445

2

LABEL ITEMS

EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

Nov 1980 0 0 4 9 8

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, aff it in the designated space. Review the infor ation carefully; if any of it is incorrect, cr through it and enter the correct data in t appropriate fill—in area below. Also, if any the preprinted data is absent *(the area to t left of the label space lists the informatio that should appear)*, please provide it in t proper fill—in area(s) below. If the label complete and correct, you need not compl Items I, III, V, and VI *(except VI-B wh must be completed regardless)*. Complete items if no label has been provided. Refer the instructions for detailed item descri tions and for the legal authorizations und which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTAC
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP Chemclene Corporation

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 W. Lloyd Balderston, President	215 644 2986

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
3 ~~R.D.#1, Box 26~~ 258 N. Phoenixville Pike	4 Malvern	PA	19355

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME
5 258 North Phoenixville Pk	Chester

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 Malvern	PA	19355	NA

CONTINUE ON REVERSE

VII. SIC CODES

	A. FIRST	B. SECOND
(specify)	2818 INDUSTRIAL ORGANIC CHEMICALS	3569 GENERAL INDUSTRIAL EQUIPMENT
	C. THIRD	**D. FOURTH**
(specify)	7 2899 CHEMICALS & CHEMICAL PREPS	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME

8 Chemclene Corporation

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)

P (specify)

D. PHONE (area code & no.) A 215 644 2986

E. STREET OR P.O. BOX

~~R.D.#1, Box 26~~ 258 N. Phoenixville Pike

F. CITY OR TOWN B Malvern

G. STATE PA

H. ZIP CODE 19355

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water) 9 N NA

D. PSD (Air Emissions from Proposed Sources) 9 P NA

B. UIC (Underground Injection of Fluids) 9 U NA

E. OTHER (specify) 9 NA (specify)

C. RCRA (Hazardous Wastes) 9 R PAD 014353445

E. OTHER (specify) 9 NA (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Chemclene Corporation is a distributor of virgin chlorinated solvents (trichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane and methylene chloride) and a recycler of waste chlorinated solvents (same as those listed above plus Freon); recycling is accomplished by simple distillation. Chemclene is also a distributor for vapor degreasing equipment.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
W. Lloyd Balderston, President	W. Lloyd Balderston	19 November 80

COMMENTS FOR OFFICIAL USE ONLY

C

(fill–in areas are ... 12 characters ...)

FORM 3 RCRA | EPA | U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F PAD014353445 T/A C 1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

☐ 2. NEW FACILITY *(Complete item below.)*

C 8 — YR. / MO. / DAY — FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

YR. / MO. / DAY — FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☒ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code*(s)* in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.
1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	64,240	G		7				
2	S 0 2	6,000	G		8				
3					9				
4					10				

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

NONE

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **HAZARDOUS WASTE NUMBER** — Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** — For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W P A D 0 1 4 3 5 3 4 4 5 — T/A: — C: 1	W — DUP — T/A: — C: 2 — DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
	F 0 0 1	792,000	P	S 0 1 S 0 2	
2	F 0 0 2				Included in Line 1.
3	F 0 0 3	17,500	P	S 0 1	
4	F 0 0 5	14,500	P	S 0 1	
5	D 0 0 1	149,000	P	S 0 1	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
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22					
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25					
26					

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

NONE

EPA I.D. NO. *(enter from page 1)*

F	P	A	D	0	1	4	3	5	3	4	4	5	T/A	C
														6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
40 03 020	075 33 057

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

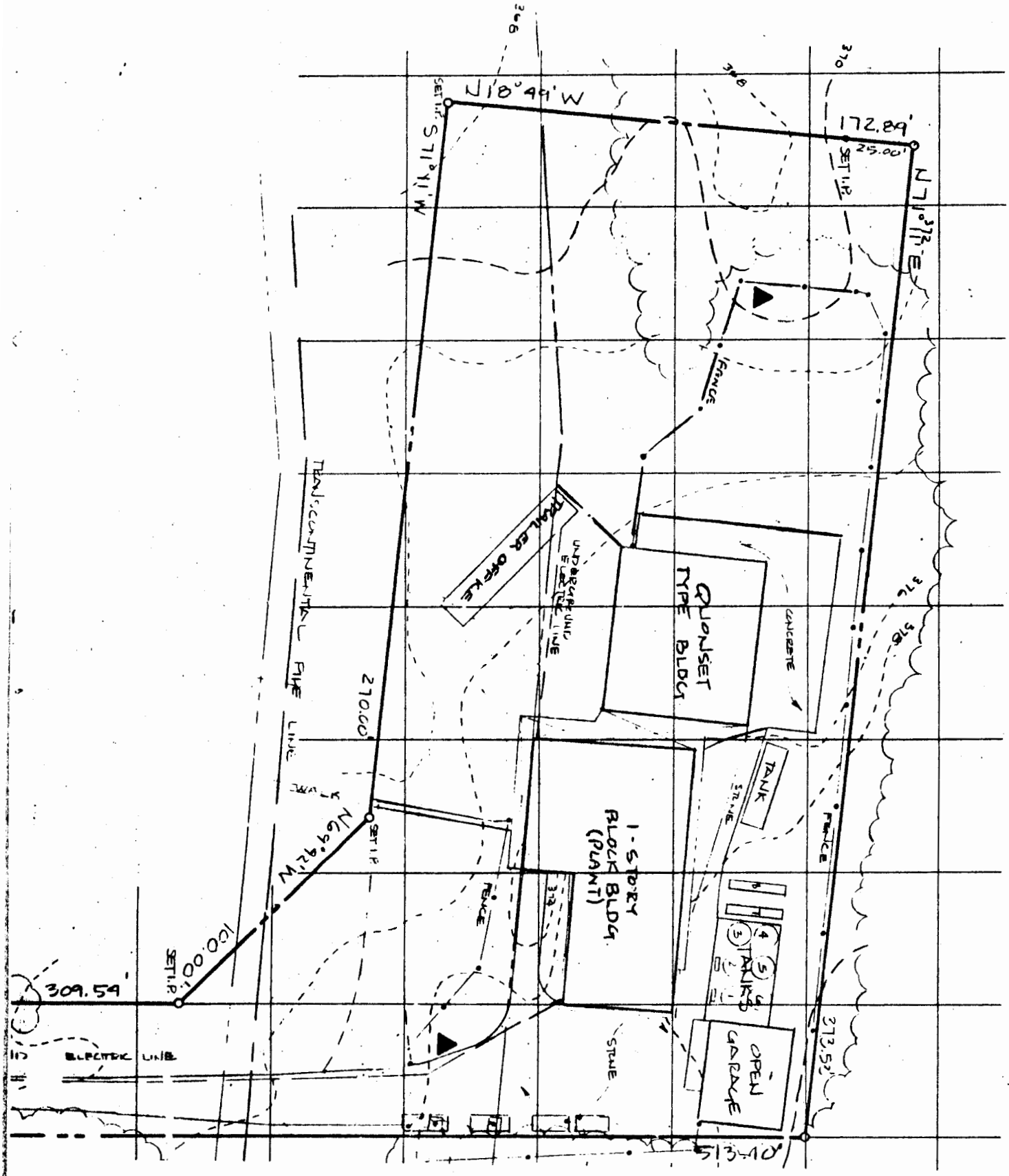
A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
W. Lloyd Balderston	W. Lloyd Balderston	17 April 1984

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

CONTINUE ON PAGE 5


N18°49'W
172.89'
25.00'
SET I.P.
N71°11'E
S71°11'W
FENCE
TRANSCONTINENTAL GAS PIPE LINE
TRAILER OFFICE
UNDERGROUND ELECTRIC LINE
QUONSET TYPE BLDG.
CONCRETE
270.00'
N69°42'W
100.00'
309.59'
1-STORY BLOCK BLDG. (PLANT)
TANK
STONE
TANKS
OPEN GARAGE
373.52'
513.10'
ELECTRIC LINE

SECTION B

FACILITY DESCRIPTION

Chemclene Corporation, founded in 1946, is a distributor of virgin and reclaimed chlorinated solvents as well as specialty blends of these chemicals. The virgin materials are purchased from the manufacturers and are brought to our facility in bulk from the manufacturer's terminals. The reclaimed material is produced on site and stored either in drums or bulk tanks.

In order to produce the reclaimed solvents, we take in waste chlorinated solvents. These solvents are stored prior to processing and it is this storage phase of our installation which is currently under interim status and the reason for submission of this Part B application.

The end product of producing reclaimed solvents, aside from the solvents themselves, are chloronated still bottoms (F002). We currently ship these wastes off site for disposal at another approved facility as a hazardous waste.

B-1 GENERAL FACILITY DESCRIPTION

Since 1952, the installation has been in its present location in Chester County, PA. The installation itself is comprised of two principle buildings and an office trailer. The active portion of the installation is surrounded by either an 8' high chain link fence with barbed wire or an 8' high

wood fence. For convenience, the facility building portion of the facility drawing has been reproduced and is included, Figure 1.

The main building is constructed of concrete block with a 4" to 6" thick concrete floor. This building houses the process equipment, general storage, a boiler room and an office for plant administration. It also houses Waste Storage Tank A and associated containment which will be installed in the future. (See also Tanks, page 47)

The second primary building, designated Storage Area #1, is a steel quanset type building with a 4" to 6" thick concrete floor. It is here that the majority of the wastes are stored. This building is contained by means of an 8" high concrete wall which surrounds the floor area just inside the outer walls.

Connecting these two buildings is a covered concrete pad which is used for the balance of the storage of waste in containers. It is designated Storage Area #2 but is also the receiving area and the temporary holding area. Like the Storage Area #1, this area [illegible] by containment walls.

The unloading area is in the process of being upgraded. The existing crushed stone unloading area is to be reconstructed as a Portland cement concrete driveway

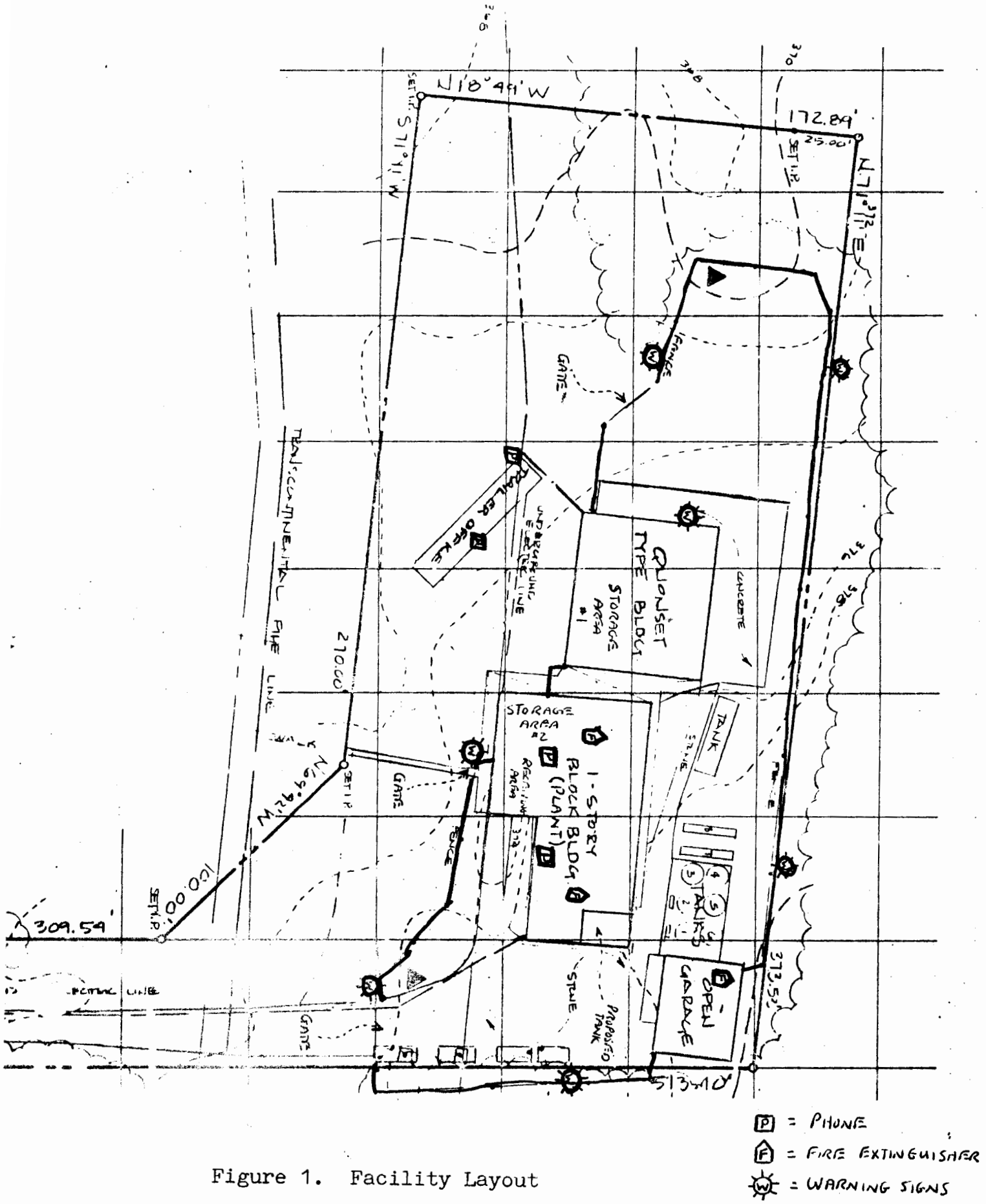


Figure 1. Facility Layout

with concrete curb walls on each side. The extent of the new concrete driveway will be from the [illegible] area east to the easterly end of the distillation room, a distance of approximately 50 feet. Existing driveway elevations will be maintained [illegible] possible and a raised concrete bump will be constructed at the east end of the new concrete driveway in order to divert the runoff from the remainder of the crushed stone driveway and parking area away from the new concrete driveway.

The new concrete unloading area shall be constructed to a thickness of 8 inches using a concrete mix conforming to the requirements of Class AA concrete, in accordance with Pennsylvania Department of Transportaion (PennDOT) specifications. The concrete shall have a minimum 28 day compressive strength of 3,750 pounds per square inch and shall be reinforced with one layer of 6 X 6 X 6/6 wire mesh. A section of the proposed concrete driveway is shown in the building layout drawing. (Blueprint)

The concrete curb walls shall be 8 inches thick and extend a minimum of 18 inches below the elevation of the new concrete driveway. The concrete curb walls shall also use PennDOT Class AA concrete, but do not require reinforcement. Expansion joints shall be placed 25 feet on center in both the driveway and

the curb walls, using a preformed expansion joint material in accordance with PennDOT specification requirements.

A concrete lined trench shall be constructed across the driveway parallel to and approximately 10 inches away from the receiving area wall. The purpose of the trench is twofold: 1) to collect storm water runon; and 2) to act as collection in the event of a spill during unloading of delivery trucks. This trench drain shall have 8 inch thick sides and bottom and shall slope from north to south, with depth varying from 4 to 8 inches. The trench shall be 12 inches in width and shall be covered with an open slotted steel trench drain cover plate. Details of this trench are shown on the accompanying building layout drawing. (Blueprint)

Existing Pennsylvania DER and U.S.E.P.A. regulations require that receiving and storage areas for liquid wastes provide a containment equal in volume to at least 10 percent of the total volume of the liquid present when a maximum number of containers are involved. The maximum size delivery truck servicing Chemclene contains a total of 80 fifty-five gallon containers, or a total of 4400 gallons of liquid. Therefore, the minimum required containment is 440 gallons or 60 cubic feet, since there are 7.48

gallons in a cubic foot. This containment area, as currently designed, will hold approximately 3,780 gallons.

In addition, the containment must provide further for possible accumulation of precipitation in the highly unlikely event that a spill would occur during a period of heavy rainfall. For all practical purposes, the design of additional storage for precipitation must take into account the 100 year storm. In southeastern Pennsylvania, maximum accumulation for the 100 year storm is considered to be 6 inches of rain in a four hour time period. Therefore, an additional six inches should be added to the depth of containment.

A flat area 12 feet wide and 6 feet long will be provided in the concrete driveway immediately to the east of the trench drain. To provide minimum containment in this area for a spill, a curb height of 12 inches is required. However, the top of the curb will be at elevation 375, or 18 inches above the surface of the driveway, on both sides of the driveway. The top of curb elevation will also be maintained at elevation 375 until it meets the existing grade. Therefore, additional containment volume, well in excess of the minimum required, will be provided.

At the south (or deeper) end of the trench, a 2 inch drain pipe will be installed. This pipe will be connected to a locking valve which will be capable of being opened only by authorized personnel. This valve will be in the closed and locked position at all times. Should a spill occur in the receiving area of the driveway, the accumulated liquid will be pumped wither into drums or into Waste Tank A. The area will then be decontaminated using suction from an on site portable vacuum tank. Accumulated rain water will be released through the 2" valve into a french drain arrangement should it be determined that it contains no hazardous constituents.

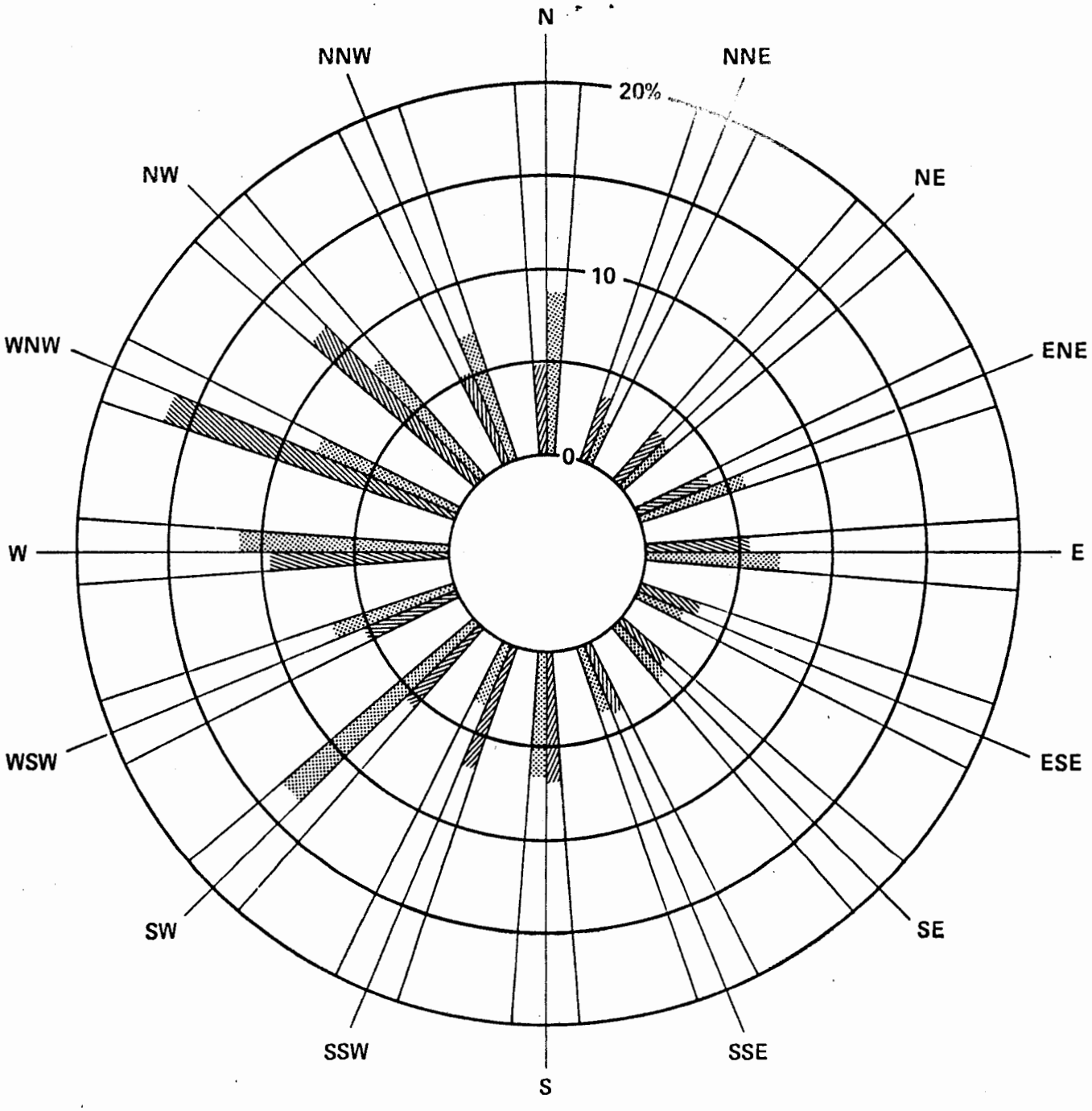
B-2 TOPOGRAPHIC MAP

A scaled topographical map (Blueprint form) is included with this application and shows the topographical plan as well as the general arrangement plan. All the land surrounding the facility is zoned residential. To the north and east of the facility there are existing housing developments. There are single residences to the west and southwest, but these areas are mostly undeveloped. Zoning maps of the area may be obtained from East Whiteland Township, 209 Conestoga Road, Malvern, PA 19355. The only standing surface water is to the west of the facility and is a seasonal stream that flows

LIMERICK
1/72-12/76
HEIGHT 270 FT.

VS

PHILADELPHIA
1/71-12/75
HEIGHT 20 FT.



PHILADELPHIA – 1.0% CALM

LIMERICK – 1.2% CALM

LIMERICK GENERATING STATION
UNITS 1 AND 2
ENVIRONMENTAL REPORT

LIMERICK VS. PHILADELPHIA
WIND DIRECTION PERCENTAGE

FIGURE 2.3.2-1

from north to south. Surface water drainage on the facility is indicated by arrows on the topographic plan and is basically from north to south and does not drain into the seasonal stream.

A wind rose is depicted in Figure 2. The meteorological data was taken between the years 1972 and 1976 at Limerick, PA which is approximately 12 miles to the northwest of the facility.

There are no injection wells, either on or off site. The location of withdrawal wells is indicated on the topographic plan. There also are no sewers on the premesis of this facility. The closest public sewer runs under James Thomas and Aston Roads to the north and northeast. There is a septic system that originates in the northwest corner of the non-waste storage room (see building layout drawing - blueprint) and runs westward and to the north of storage area No. 1 under the outside concrete pad (no waste storage). This system consists of a septic tank and a drainage field, and receives both septic and waste-water waste. There are no drains in any of the floors of any of the buildings and thus no possible direct connection between the septic system and stored hazardous waste. The nearest fire hydrant is approximately 400 feet to the northwest at the intersection of Spruce and James Thomas Roads while the other is

approximately 700 feet to the northeast at the intersection of Aston Road and Phoenixville Pike. There are no flood control or drainage barriers as none are needed.

B-3b FLOODPLAIN STANDARD

According to the flood hazard boundry map (Community Panel No. 420279 0005A) prepared by the Federal Emergency Agency for East Whiteland Township. Chemclene is not within the 100 year floodplain (See Appendix A).

B-4 TRAFFIC INFORMATION

Chemclene Corporation is reached from North Phoenixville Pike via its own private driveway. The entrance drive is one-way and constructed of packed, cursched stone (see section 1-1 on topographic plan drawing). Traffic entering the facility can either turn around inside the main gate, or outside the gate in the car parking lot. Once inside the gate trucks back into the loading/unloading area. Traffic consists mostly of Chemclene's own trucks: One 27 drum flat-bed straight truck, one 2,500 gallon straight tank truck, one 4,300 gallon trailer and one 20 ton dump trailer. The maximum number of trucks hauling hazardous waste that enter and leave the facility per day is three, but the average is 1.5. There are no traffic signals.

SECTION C

WASTE CHARACTERISTICS

This section describes the chemical and physical nature of the hazardous wastes stored at Chemclene and the waste analysis plan for sampling, testing, and evaluating the wastes to assure that sufficient information is available for their safe handling and storage.

C-1 CHEMICAL AND PHYSICAL ANALYSIS

List of wastes stored at facility: Hazardous waste is now stored in 55 gallon drums only. In the future a 6,000 gallon, two compartment (3,000 gallons each) tank will be used to store only waste trichlorethylene, waste 1,1,1-tricholorethane, waste perchorethylene, waste methylene chlorine, waste trichlorotrifluro-ethane or mixtures of these wastes. The specifications of this tank and its containment are discussed in section D-2 of this application. The majority of the waste stored at this facility is generated off-site by other companies. However, Chemclene does generate some waste on-site in the form of still bottoms from the recovery of halogenated solvents. Table 1 lists all the wastes (each waste stream) stored at Chemclene regardless of where the waste was generated. This table gives the waste description, the hazard characteristics, the basis for the hazard

TABLE 1

WASTES, ASSOCIATED HAZARDS, BASIS FOR HAZARD DESIGNATION & GENERATING PROCESS

WASTE ID #	WASTE Description	Hazard	Basis for Hazard Designation	Process Generating Waste
229	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of steel alloys containing lead & Manganese
197 a	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of mild steel & stainless steel
197 b	1,1,1-Trichloroethane	Toxic	Listed waste F001	Vapor degreasing of mild steel & stainless steel & zinc plated steel
311 a	1,1,1-Trichloroethane & Naptha mixture	Toxic	Listed waste F001	Dip cleaning of metal parts (various alloys)
311 b	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of metal parts (various alloys)
213	Perchloroethylene	Toxic	Listed waste F001	Vapor degreasing of metal alloys
336	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of mild steel
368	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of mild steel
292	1,1,1-Trichloroethane	Toxic	Listed waste F001	Vapor and cold degreasing of steel alloys
163	Methylene Chloride	Toxic	Listed waste F001	Vapor degreasing of steel & zinc plated steel
233	1,1,1-Trichloroethane	Toxic	Listed waste F001	Vapor & cold degreasing of mild steel
277	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of zinc & copper plated steel
110 a	1,1,1-Trichloroethane	Toxic	Listed waste F001	Dip cleaning of steel
110 b	Methylene Chloride	Toxic	Listed waste F001	Removing paint from steel

TABLE 1 Cont'd

WASTES, ASSOCIATED HAZARDS, BASIS FOR HAZARD DESIGNATION & GENERATING PROCESS

WASTE ID #	WASTE Description	Hazard	Basis for Hazard Designation	Process Generating Waste
369	1,1,1-Trichloroethane	Toxic	Listed waste F001	Degreasing steel
339 a	1,1,1-Trichloroethane	Toxic	Listed waste F001	Hot degreasing of metal parts
339 b	1,1,1-Trichloroethane/ Perchloroethylene mix	Toxic	Listed waste F001	Cold degreasing of metal parts
265a	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of steel parts
192	Trichloroethylene	Toxic	Listed waste F002	Vapor developing & fixation of printing plates
345	1,1,1-Trichloroethane	Toxic	Listed waste F001	Ultrasonic cleaning of brass, bronze, steel, stainless steel, monel, copper & nickel
119	1,1,1-Trichloroethane	Toxic	Listed waste F001	Vapor degreasing of stainless steel wire
327	Methylene Chloride & Alcohol mixture	Ignitable Toxic	Flash point of ethanol is 61°F Flash point of waste reported at 130°F Toxic due to Methylene Chloride	Cleaning & degreasing (cold dip) mild steel & aluminum
351	1,1,1-Trichloroethane	Toxic	Listed waste F001	Cold dip degreasing metal parts
353 a	Ethanol & Ethyl Acetate mixture	Ignitable	Flash point of waste reported as 27°F	Cold cleaning of printing equipment
353 b	Perchloroethylene & Butyl Alcohol mix	Ignitable Toxic	Flash point of waste reported at 120°F Toxic due to perchloroethylene	Manufacturing of flexographic printing plates
283	1,1,1-Trichloroethane	Toxic	Listed waste F001	Cleaning of printed circut boards

TABLE 1 Cont'd

WASTES, ASSOCIATED HAZARDS, BASIS FOR HAZARD DESIGNATION & GENERATING PROCESS

WASTE ID #	WASTE Description	Hazard	Basis for Hazard Designation	Process Generating Waste
157	1,1,1-Trichloroethane	Toxic	Listed waste F001	Cleaning of printed circut bo
311 c	Paint cleaning solvent	Ignitable	Flash point of waste reported as 50°F	Cleaning of painting equipmen
311 d	Naptha & Cetyl Alcohol	Ignitable	Flash point of waste reported as 50°F	Dipping of parts for lubricat
336	Toluene	Ignitable	Flash point of waste reported as 48°F	Cleaning of painting equipmen
217 a	Acetone/Toluene paint cleaner	Ignitable	Flash point less than 140°F	Cleaning of paint spraying e
201	Hexane	Ignitable	Flash point less than 50°F; flash point of pure hexane is -10°F	Degreasing mineral oil from lithium metal
156	Perchloroethylene & Butyl alcohol	Ignitable Toxic	Flash point of waste reported at 120°F Toxicity due to perchloroethylene	manufacturing of flexographic printing plates
217 b	1,1,1-Trichloroethane & Aliphalic Hydrocarbons	Ignitable Toxic	Flash point of waste reported at <140°F Toxicity due to 1,1,1-Trichloroethane	Degreasing metal parts
265 b	Mineral spirits, Methylene Chloride, Perchloroethylene (safety-solvent)	Ignitable Toxic	Flash point of pure safety solvent is<105°F Toxicity due to methylene chloride & perchloroethylene	Cold cleaning
99 a	Trichloroethylene	Toxic	Listed waste F002	Solvent reclaimation (still)

TABLE 1 Cont'd

WASTES, ASSOCIATED HAZARDS, BASIS FOR HAZARD DESIGNATION & GENERATING PROCESS

WASTE ID #	WASTE Description	Hazard	Basis for Hazard Designation	Process Generating Waste
99 b	Perchloroethylene	Toxic	Listed waste F002	Solvent reclaimation (still)
99 c	Methylene Chloride	Toxic	Listed waste F002	Solvent reclaimation (still)
99 d	1,1,1-Trichloroethane	Toxic	Listed waste F002	Solvent reclaimation (still)
236	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of metal castings
330	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of mild steel
103	1,1,1-Trichloroethane	Toxic	Listed waste F001	Removal of bees wax from glass thermometers
115 a	Ethanol, Isopropanol, Methanol, Paint mix	Ignitable	Flash point of waste reported as 101°F	Clean-up of paint equipment
115 b	1,1,1-Trichloroethane	Toxic	Listed waste F001	Cold & vapor degreasing of zinc & nickel alloys
178	1,1,1-Trichloroethane	Toxic	Listed waste F001	Degreasing stainless steel in ultrasonic dip tank
147	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of steel & Copper plated steel
118	1,1,1-Trichloroethane, isopropanol, Trichloro-trifluroethane & solder flux	Toxic	Listed waste F001	Cleaning of printed circut boards
208	Trichloroethylene	Toxic	Listed waste F001	Vapor degreasing of mild steel parts

TABLE 1 Cont'd

WASTES, ASSOCIATED HAZARDS, BASIS FOR HAZARD DESIGNATION & GENERATING PROCESS

WASTE ID #	WASTE Description	Hazard	Basis for Hazard Designation	Process Generating Waste
193 a	Trichloroethane	Toxic	Listed waste F001	Vapor degreasing of metal parts (various alloys)
193 b	Perchlorethylene	Toxic	Listed waste F001	Vapor degreasing of metal parts (various alloys)
158	Laquer Thinner	Ignitable	Flash point of waste reported as < 140 °F	Clean-up of painting equipment
188	Acetone, Methanol & Hexane mixture	Ignitable	Flash point of waste reported as 140°F	Clean-up of glass & wastes from laboratory
180a	Methyl Ethyl Ketone	Ignitable	Flash point of waste reported as 22°F	Clean-up of painting equipment
180 b	Laquer Thinner	Ignitable	Flash point of waste reported as 24-30°F	Thinning paints
183	Methylene Chloride	Toxic	Listed Waste F001	Degreasing system for steel
333	Polyurithane & 1,1,1-Trichloroethane	Toxic	Listed waste F001	Cleaning glass
216	Trichlorethylene	Toxic	Listed waste F002	Degreasing steel tubes
102	1,1,1-Trichloroethane, Acetone, paints, plasticizer	Ignitable	Flash point of waste reported as 0°F	Residue from parts cleaning
141	1,1,1-Trichloroethane	Toxic	Listed waste F001	Degreasing parts
174	Trichlorethylene	Toxic	Listed waste F001	Vapor degreasing

designation and a description of the process generating the waste.

Data describing the chemical composition of each waste stream is provided in the form of completed hazardous waste characterization froms (See Appendix B). A portion of each form lists organic compounds at 0.1% or greater, inorganic compounds and metals. Many of the waste halogenated solvents also contain petroleum oils. A detailed description of the typical composition of these oils is given in "used oil burned as a fuel", 1980, EPA (Vol. 1), SW-892. In addition, general information and hazardous characteristics of the pure compounds are provided in Appendix C.

Waste Handling: All off-site wastes are labeled prior to transporation and thus arrive at Chemclene labeled; the label describes the waste type and its associated hazard (toxicity or ignitability).

In addition, an "internal label" is placed on each drum when it is unloaded at Chemclene. This label describes the contents, the number of drums in the shipment, the date received, the generator, and gives that shipment an identifying number. This number is then used to identify where the waste is stored (which is entered in the operating record) and the results of the spot check analysis. On-site generated wastes receive an "internal label" when the drum is full

and are subject to the same handling proceedures as outlined above.

When the spot check analysis shows a waste is not manageable at this facility (ie.) it is not the same as the waste descirbed in the waste characterization on file) it will be rejected and returned to the generator. This rejection will be noted on the origional manifest as well as the reasons for the rejection. Chemclene will know when a waste generating process has occured when the spot check analysis shows a difference between the waste received and the waste described in the current waste characterization form on file at this faciltiy. If the waste is manageable at this faciltiy, but is not within the range stated on the characterization form, the generator shall be notified and required to submit a new waste characterization form.

C-1a NOT APPICABLE

C-1b See D-2a

C-2 Waste Analysis Plan

Parameters and Rationale.

Table 2 shows the general types of hazardous waste stored at Chemclene, the analytical parameters used in the analysis of each and the reasons for the use of those parameters. Generalized grouping of the wastes is used on the basis the every waste within its group would be analysed in the same way for the

TABLE 2

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
Trichloroethylene	Annual only: Trichloroethylene	Trichloroethylene is the constituent for which the waste (F001 & F002) is listed. There is no reason to believe this waste will contain any other toxic materials in significant concentrations.
	Annual & Spot Check: Color, odor, phase, flash point, specific gravity, and pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
1,1,1-Trichloroethane	Annual only: 1,1,1-Trichloroethane	1,1,1-Trichloroethane is the constituent for which the waste (F001 & F002) is listed. There is no reason to believe this waste will contain any other toxic materials in significant concentrations.
	Annual & Spot Check: Color, odor, phase, flash point, specific gravity, and pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.

TABLE 2 Cont'd

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
Methylene chloride	Annual only: Methylene chloride	Methylene chloride is the constituent for which the waste (F001 & F002) is listed. There is no reason to believe this waste will contain any other toxic materials in significant concentrations.
	Annual & Spot Check: Color, odor, phase, flash point, specific gravity, and pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
Perchloroethylene	Annual only: Perchloroethylene	Perchloroethylene is the constituent for which th e waste (F001 & F002) is listed. There is no reason to believe this waste will contain any other toxic materials in significant concentrations.
	Annual & Spot Check: Color, odor, phase, flash point, specific gravity, and pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.

TABLE 2 Cont'd

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
All wastes listed in table 1 as being ignitable only	Annual only: Analyse for the compound(s) that makes the waste ignitable	The ignitable component is the continuent for which the waste is listed (D001, F003, F005)
	Annual analysis & Spot Check: Color, order, phase, flash point, specific gravity & pH	These wastes are ignitable; in the purified form these compounds all have flash points less than 140°F; knowledge of this parameter is also necessary to form a general characterization so that the identity of the waste may be verified. Knowledge of these parameters is necessary to form a general characterization so that the identy of the waste can be verified.

TABLE 2 Cont'd

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
Methylene Chloride & Alcohol mixture	Annual only: Methylene Chloride and Alcohals Annual & Spot Check:	Methylene Chloride is considered toxic.
	Flash point	The alcohols present cause the flash point to be less than 140°F; knowledge of this value assures safe handling and storage; knowledge of this parameter is also necessary to form a general characterization so that the identity of the waste may be verified.
	Color, odor, phase, specific gravity, & pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
Perchlorethylene and Butyl Alcohol mixture	Annual only: Perchlorethylene and Butyl Alcohal Annual & Spot Check:	Perchlorethylene is considered toxic.
	Flash point	The alcohols present cause the flash point to be less than 140°F; knowledge of this value assures safe handling and storage; knowledge of this parameter is also necessary to form a general characterization so that the identity of the waste may be verified.

TABLE 2 Cont'd

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
Perchlorethylene & Butyl Alcohol mixture Cont'd	Annual & Spot Check: Color, odor, phase, specific gravity, & pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
1,1,1-Trichloroethane & Aliphatic Hydrocarbon mixture	Annual only: 1,1,1-Trichloroethane & Aliphatic Hydrocarbons	1,1,1-Trichloroethane is considered toxic.
	Annual & Spot Check: Flash point	The flash point due to the presence of aliphatic hydrocarbons is less than 140°F. Knowledge of these values assures safe handling and storage.
	Color, odor, phase, specific gravity, & pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
Mineral Spirits, Methylene Chloride & Perchlorethylene Mixture	Annual only: Methylene Chloride & Perchlorethylene & Mineral Spirits	Methylene Chloride & Perchlorethylene are considered toxic.
	Annual & Spot Check: Flash point	Due to the mineral spirits the flash point is less than 140°F. Knowledge of this value assures safe handling and storage.

TABLE 2 Cont'd

WASTE ANALYSIS: PARAMETERS AND RATIONALE FOR THEIR SELECTION

WASTE DESCRIPTION	PARAMETER	RATIONALE
Mineral Spirits, Methylene Chloride & Perchloroethylene Mix (CONT'D)	Annual & Spot Check: Color, odor, phase, specific gravity & pH.	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified.
1,1,1-Trichloroethane, Acetone, Paints & Plasticizer	Annual Only: 1,1,1-Trichloroethane & acetone	1,1,1-trichloroethane is considered toxic
	Annual & Spot Check: Flash point, color, odor, phase, specific gravity and pH	Knowledge of these parameters is necessary to form a general characterization so that the identity of the waste can be verified. These wastes are ignitable due to a flash point of less than 140°F; knowledge of this value assures safe handling and storage.

same reasons (eg. ignitables and specific F001 and F002 wastes). On-site generated wastes will be subjected to the complete chemical analysis on a yearly basis. Bulk waste (F001 and F002 only) spot checks will utilize the same parameters and rationale as those listed in Table 2.

Quality assurance/ quality control proceedures. Waste analysis performed at this facility will be checked for their quality every year by splitting a sample for the spot check of two different waste streams with an independant laboratory. Analytical results will be compared to determine the quality of Chemclene's data. Waste sampling performed at this facility will be periodically checked for accuracy by a member of the preparedness and prevention committee.

C-2b TEST METHODS

Data on the chemical composition of each waste stream is taken from generator certified hazardous waste characterization forms. In most cases, the generator and Chemclene have discussed each waste in detail. First hand observation of and experience with the waste in question is used to a great extent in arriving at the chemical composition. In most cases, information published in applicable material safety data sheets was used to arrive at values for the

selected parameters. These methods were suggested by E.P.A. toxicologists Dr. Samuel L. Rotenberg during discussions with him prior to the preparation of this application.

In addition, Chemclene does test for a number of parameters before any waste stream is accepted for storage or when an accepted waste stream changes due to a process change. Some of these methods are also used in the spot checks performed on each waste shipment. The methods used to amplify the annual analysis or the data reported on each waste characterization form are as follows:

Parameter	Test Method	Reference
Flash Point	Pensky-Martens closed cup tester	ASTM Standard D-93 or D-93-80
Any Halogenated Solvent Any ignitable Solvent	Gas Chromatography	Test methods for evaluating solid waste U.S.E.P.A. SW846; methods 8.80 & 8.01 & 8.02

The parameters and methods used in the spot check are as follows:

1. Color -- A sample of the waste is placed in a clear, glass container (eg. 250 ml beaker) and its color visually observed against a white background under good lighting conditions. If the color is similar to that expected from information given in the waste characterization form then the sample passes this test.

2. Characteristic odor - during the normal handling of the waste for analysis any characteristic odor that is observed will be noted as a very general method of characterization. Inhalation of high concentrations of volatiles will be avoided. If the odor is similar to that expected from information given in the waste charaterization form then the sample passes this test.

3. Waste phase -- Using the same sample and container described in #1 above, the waste is allowed to stand undisturbed for approximately 10 minutes. After that time period the sample shall visually be observed for the presence of any multiple liquid layers or physical phases (such as solids and liquids) and the approximate percentage of each phase noted. If the phases observed are the same as those described in the annual waste characterization form then the sample passes this test.

4. Ignitability (Flash Point) -- A 100ml sample of the waste is heated to 140°F in an open metal cup. Upon reaching the desired temperature a flame will be passed across the top of the open cup. If the vapor in the cup flashes or ignites the sample will be defined as ignitable. The results of this test must agree (within $\pm$ 15°F) with the data in the annual waste characterization form in terms of flash point less than or greater than 140°F.

5. Specific gravity -- Specific gravity accurate to 10^{-2} is measured using a standard hydrometer of

the appropriate range. At the same time, the temperature of the waste is noted for accuracy of the specific gravity measurement. The results must agree within ± 10% with the value listed in the annual waste characterization report. ASTM method number D2111-71 (reapproved 1978) will be used.

6. pH -- The pH of the sample is measured using pH indicating paper capable of measuring 0.5 pH units. If the sample is non-aqueous it is shaken vigorously with a small amount of unbuffered water for approximately one minute and then allowed to stand until the water separates. The resulting water layer is analysed for pH as above and the results taken as the pH of the non-aqueous sample. For aqueous samples the pH is measured directly with no shaking. The results must agree within ± 0.5 pH unit with the value or range given in the annual waste characterization report.

C-2c SAMPLING METHODS

As each individual waste characterization form serves as the annual analysis, only sampling methods concerning the spot check are discussed here. For drummed waste, each drum in each shipment received will be sampled and analysed, if the shipment is 20 drums or less, for each different type of waste. For shipments of greater than 20 drums of each waste type, a random 10% of the drums will be sampled.

The sample will be withdrawn from drums using a glass Coliwasa sampler as described in "Test Methods For The Evaluation of Solid Waste. Physical/chemical methods", SW-846, U.S.E.P.A., Method 3.2.1. until a 200ml sample is obtained. Between samplings the Coliwasa will be cleaned by rinsing with a volatile solvent and allowing it to dry. In order to achieve a representative sample from bulk transport tanks, a Coliwasa will also be used to sample to the bottom of the tank. If sampling with a Coliwasa shows no layers are present, a grab sample will be taken. If layers are present, grab samples of each layer will be taken. Grab samples will be taken using a weighted bottle and stopper the same as that described in "Test Methods for the Evaluation of Solid Waste", SW-846, U.S.E.P.S., Method 3.3.1.

Sample storage containers will be glass with teflon-lined screw caps. Glass and teflon are compatible with all of the types of waste Chemclene will handle (only hydrofloric acid in not compatible with glass).

C-2d FREQUENCY OF ANALYSIS

Each generator of waste stored at Chemclene will be required to submit an updated waste characterization form annually. Spot checks of both drummed and bulk waste will be performed on each shipment from a particular generator when the waste arrives at Chemclene. On-site generated waste will be analysed annually.

C-2e ADDITIONAL REQUIREMENTS

As most of the waste stored at this facility is generated off-site, all of these additional requirements have been addressed in the above discussion of the waste analysis plan. (See sections C-2a thru C-2d.)

CONTAINERS

D-1a(1) CONTAINERIZED WASTES

Wastes which are toxic only are received in drums with the DOT spec. numbers of 17H, 17E or 5B. These are all 18 guage (min.) drums of the 55 or 30 gallon size. These drums might be new, used, or reconditioned. Waste numbers included in this group are: F001, F002. The drums are labeled using the label shown in Appendix D. Compatibility of drums with listed wastes is in accordance with DOT specifications and supporting research.

Wastes which are ignitable only or ignitable and toxic are received in drums with the DOT spec. numbers of 17H, 17E, or 5B. These are all 18 guage (min.) drums of the 55 or 30 gallon size. The drums might be new, used or reconditioned. Waste numbers included in this group are: D001, F003, F005,

These drums are marked using the labels found in Appendix D. Compatibility of drums with listed wastes is in accordance with DOT specifications and supporting research.

D-1a(2) DESCRIPTION OF CONTAINER MANAGEMENT PRACTICES

1. Assurance of receipt of sound drums

a. We are the transporters for 95% of the drummed waste brought to our facility. As such, to comply with transporter regulations and requirements, we insist that the waste be placed in sound drums by the generator prior to transport. Upon arriving at the generators facility, the driver inspects each drum for any sign of damage, defect or potential problem. Should such a condition exist, the drum is not accepted for transportation until the contents have been placed into a sound drum. This detailed pre--transport inspection helps insure that the drums arriving at our facility are in good condition.

b. When wastes are brought to our facility by other transporters, the drums are inspected prior to off loading. In addition to inspecting the drums, the receiver checks the bed of the truck for signs of leakage or spillage which may have occurred in transit. Should this condition exist or if unsound drums are

found, the drums are marked for immediate redrumming. If the frum cannot be safely moved without causing leaking, it is redrumed in place.

2. Opening

Drums are opened only to add or remove waste, as in sampling or redrumming. Drums are opened slowly to allow for the gradual release of any pressure or vacuum which may have developed. Drums are not opened while in storage.

3. Handling

Drums are moved within the facility either by a hand operated drum dolly or by a specially designed "drum grabber" which lifts the drum by the chines without squeezing the drum.

4. Inspection

Whether this takes place at our facility or at the generators location, drums are checked for the following:

Excessive rusting

Kinks, dents or holes

Paint blisters

Tightness of drum closure

Pooled liquid under or around the drum

Leaking when drum is moved

5. Emergency Response

Upon detecting leaking or spilled material the offending drum is located and the PPC Plan is enacted immediately.

6. Ignitable Wastes

Ignitable wastes which we accept and toxic wastes which we accept are compatable with each other. Therefore, it is not necessary to physically isolate the ignitable and toxic wastes from each other by means of a dike. We do however, have sections of the storage area designated for flammable storage. This is done to meet required aisle space and stacking requirements. The storage area layout is show in Figure 4.